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MICHAEL C. TRAHOS, D.O.
GENERAL MEDICINE/FAMILY PRACTICE

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
Amendment of The Commission's)
Rules to Establish a New Radio)
Service (within 47 CFR Part 95))

RM-8499

COMMENTS

Submitted by:

Dr. Michael C. Trahos, D.O., NCE, CET
4600 King Street, Suite 6K
Alexandria, Virginia 22302

August 25, 1994

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I.

INTRODUCTION

1. Dr. Michael C. Trahos, D.O., NCE, CET (Commenter), pursuant to Section 1.405 of the Federal Communications Commission's (Commission) Rules, hereby submits these timely Comments in response to a Petition for Rule Making (Petition), RM-8499, filed by the Radio Shack Division of Tandy Corporation (Tandy) to amend 47 CFR Part 95 with regards to the establishment of a new radio service called the Family Radio Service (FRS).



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II. COMMENTS QUALIFICATIONS

2. Commenter is a licensed and actively practicing **General Medicine/Family Practice Physician and Surgeon**. Commenter holds the academic faculty appointments of **Clinical Professor of Medicine** from Ross University School of Medicine and **Clinical Instructor**, Department of Community and Family Medicine, Georgetown University School of Medicine. Commenter currently holds the position of **Chairman - Legislative Affairs Committee and President** of the Alexandria [Virginia] Medical Society (AMS), **Chairman - Legislative Affairs Committee** of the District of Columbia Osteopathic [Medical] Association, past **Vice-President** of the Virginia [State] Osteopathic Medical Association (VOMA), **VOMA Virginia State Delegate** to the [National] American Osteopathic [Medical] Association (AOA) House of Delegates and **VOMA Federal Representative** to the AOA Council on Federal Health Programs.

3. Commenter was selected/elected and currently serves as the **"Medical Profession" Representative** on the Technical Committee, **Chairman - Legislative/Regulatory Affairs Committee** and **Special Emergency Radio Service Representative** on the RPRC of the National Public Safety Planning Advisory Committee's (NPSPAC) Region-20 [State of Maryland, Washington, DC and Northern Virginia] Public Safety Plan Review Committee (RPRC), for the development and implementation of a Public Safety National/Regional Plan (General



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Docket 90-7) for the use of the 821-824/866-869 MHz bands by the Public Safety Services pursuant to the Report and Order in General Docket 87-112.

4. Commenter is also a certified **First Class Telecommunications Engineer**, certified by the National Association of Radio and Telecommunications Engineers (NARTE), and possessor of a **First Class Certificate of Competency**, issued by the Association of Public-Safety Communications Officers (APCO). Commenter has approximately twenty years experience in the telecommunications field with many of these years spent actively participating in Commission proceedings.

5. Commenter is licensed in the Amateur Radio Service (ARS), the Business Radio Service (BRS), the General Mobile Radio Service (GMRS) and Special Emergency Radio Service (SERS). Commenter has/is serving as a voluntary frequency/CTCSS/DCS GMRS coordinator for the Washington, D.C. metropolitan area. It is with having the above extensive expertise in dealing with personal, business, medical and emergency/public assistance communications matters that this Commenter is qualified to make the following comments in response to this Petition for Rule Making.



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III.

COMMENTS

6. Tandy states that "[d]uring the nearly six-year period following the GMRS Report & Order, no plan has been advanced nor has the use of the 467 MHz channels been requested."1/ Though this is true, reasons exist for the lack of a plan.

7. In the Report and Order to PR Docket 87-265 (GMRS Report & Order), the Commission did not authorize the use of the 467 MHz interstitials because such a release "may compromise the evolution of repeater technology."2/ Allowing the 467 MHz interstitials to remain fallow "could allow for the development of narrow-band technology in the GMRS, such as the linear predictive coding advanced by the PRSG in RM-5058"3/ and RM-5242.

8. On June 13, 1991, the Commission adopted a Notice of Inquiry (Refarming Inquiry) PR Docket 91-170 concerning the spectrum efficiency in the Private Land Mobile Radio Services (PLMRS).4/ The Refarming Inquiry focused specifically on the issues of advancing new narrow-band and digital technologies and technical regulatory changes for the PLMRS. Though the Refarming Inquiry was dealing with the PLMRS, the Commission was also soliciting comments regarding future implementation, from the outcome of the Refarming proceeding, upon other radio services including GMRS.5/



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9. On October 8, 1992, the Commission adopted a Notice of Proposed Rule Making (Refarming Notice) PR Docket 92-235 concerning the refarming of the PLMRS spectrum with the implementation of the more spectrum efficient narrow-band and digital technologies.6/ The Refarming Notice has superseded and incorporated the issues raised in the Refarming Inquiry.7/

10. The GMRS community is awaiting the outcome of this proceeding to see what new narrow-band and digital technologies arise thereto for probable future GMRS incorporation, fulfilling the Commission's desire for GMRS evolution using advanced technologies.8/ With the Refarming Report and Order pending, and RM-5058/RM-5242 on record, it has been inappropriate for the GMRS community, commercial sector or industry to advance any new GMRS evolutionary plan(s) at this time.

11. Tandy's Petition proposes no new advanced technologies, such as digital or narrow-banding. They merely plan to use current, 25 KHz bandwidth, analog technology equipment with the addition of sophisticated selective-calling "bells and whistles". Flooding the 467 MHz interstitial frequencies with inexpensive, current technology, analog unlicensed transceivers would definitely jeopardize any chance for the future evolution of digital and narrow-band repeater technology in the GMRS.



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12. The Commission's reasoning for not authorizing the 467 MHz interstitials in 1988 still holds today. Therefore, the Commission should reject Tandy's proposal of using the 467 MHz interstitials and reiterate that the use of these frequencies shall remain absolutely prohibited until a plan proposing advanced technologies is introduced.

13. Flooding the GMRS with FRS transceivers capable of 467 MHz interstitial frequency operations also poses a much more serious immediate problem; the certain ultimate risk of interference to current primary 467 MHz repeater input channels (47 CFR 95.29(a)(2)).

14. In the GMRS, regular servicing of station transmitters is required (47 CFR 95.131), otherwise the Commission can impose severe monetary penalties for off frequency operations.^{9/} All transmitters, over time, do frequency drift. Regular frequency checking becomes mandatory.

15. In the unlicensed Citizens Band Radio Service (CBRS), there is no incentive for CB operators to spend money to have their radios periodically frequency checked, despite the Commission's Rules requiring it. And with the limited budget and manpower of the Field Operation Bureau (FOB), enforcement of the rules upon off frequency unlicensed CBRS transceivers is essentially nonexistent.



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16. What is happening in the CBRS with off frequency transceivers, and unfortunate lack of FOB enforcement thereof, will also become the norm in the proposed FRS, if adopted. But in the FRS, off frequency operations on the 467 MHz interstitials would have a more devastating effect.

17. When FRS 467 MHz transceivers ultimately drift off frequency far enough to be within the bandpass of a primary 467 MHz repeater receiver input, harmful interference with receiver degradation will result. And without any FRS automatic transmitter identification (with the associated massive database records keeping requirement upon Tandy) or call sign usage requirement (not even a simple WT + 7 digit phone number identification as required for temporary GMRS authorizations) having been proposed to address this matter, the ultimate impact risk on primary frequency GMRS repeater operations will be deleterious and devastating.

18. The risk upon GMRS repeater operations from off frequency FRS 467 MHz transceivers is unacceptable. It offers another reason why the Commission should continue to prohibit any operations on the 467 MHz interstitials, as elaborated in paragraph 12, supra.

19. Tandy's proposed FRS operations on 467.675 MHz to unrestrictively access 467/462.675 MHz repeaters 10/ under the guise of public safety should not be adopted. Allowing secondary



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use unlicensed transceiver access to a primary use licensed main repeater input frequency only invites chaos and abuse.

20. Tandy proposes that the Commission reevaluate "transient use" of repeaters and strongly suggests that all repeaters on 467/462.675 MHz be considered "open", thereby creating an emergency repeater network for any FRS user to gain access to for emergency use.^{11/} This proposal raises two unanswered problematic issues, repeater control and financial support of GMRS repeaters.

21. In the Notice of Proposed Rule Making to PR Docket 87-265, the Commission initially proposed, what Tandy now re-proposes, that all 467/462.675 MHz repeaters be considered "open".^{12/} After reviewing the extensive comments, replies and ex partes submitted, the Commission correctly concluded that mandating repeaters be considered "open", "impinges on the licensee's ability to adequately discharge required control functions under the Rules"^{13/}, and declined to do so.

22. GMRS licensees have also established mobile relay stations utilizing cooperatively shared user arrangements as a means of financing these expensive repeater systems. Many cooperatively shared end-users join, and pay user fees, for the sole purpose of having access to these repeaters for emergency communications only!



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23. Tandy's proposal of "open" repeaters will undermine the financial foundation for several cooperatively shared user systems. Ironically, Tandy's proposal may have the opposite effect of closing down 467/462.675 MHz repeater systems because of the financial exodus of emergency use only cooperatively shared users.

24. Tandy has failed to bring forth methods or technology to ensure that FRS users cannot inappropriately access and abuse 467/462.675 MHz repeaters. The Private Radio Bureau (PRB) and FOB are well aware of the continued current abuse of closed, let alone open, 467/462.675 MHz repeaters by licensed GMRS operators under the guise of emergency communications. FOB to date has yet to resolve these licensed operator repeater input (467 MHz) access abuse problems.

25. Tandy's open repeater proposal threatens licensees' ability to control and finance their repeater systems. This cannot be allowed to occur. Therefore, Commission rejection of Tandy's open repeater proposal and FRS use of the 467.675 MHz frequency is appropriate. If an individual desires access to 467.675 MHz for emergency communications through 467/462.675 MHz repeaters, then they should apply for, and be appropriately granted, a GMRS license from the Commission.



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26. Tandy proposes that "in order to ensure that FRS transmissions do not interfere with GMRS transmissions,^{15/} Tandy suggests transmitter output power of 500 milliwatts.^{16/}"^{14/} Tandy, however, fails to establish an appropriate Effective Radiated Power (ERP) limit.

27. Pursuant to 47 CFR 95.29(f)(3) and 95.25(e)(2), the maximum licensed power for transmissions on the interstitial frequencies and small base stations is 5 watts ERP. An unlicensed 500 milliwatt (mW) [0.5 watt] FRS transmitter attached to a commercially available external antenna system with a net gain of greater than 8 dBd or 10 dBi will result in a isotropic transmitted power in excess of 5 watts ERP, in direct violation of the above Commission rules.

28. If the Commission should create a FRS, than the transmission power of such transmitters should be limited to 500 mW ERP, not 500 mW output power. Furthermore, FRS radios should not employ quick connect/disconnect external antenna ports. The antenna should be an internally connected, integral part of the transceiver.



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29. Tandy states that "[t]hroughout its extensive testing at 500 milliwatts, Tandy received no reports of interference to other users on the proposed bands."15/ However, were Tandy's test parameters designed properly to encourage potential interference detection.

30. The majority of GMRS mobile relay stations utilize some form of CTCSS/DCS as a form of selective calling and repeater access/control. Unless a repeater receiver is set for carrier access, potential interference may be present by not audibly detected.

31. As noted in paragraph 17 supra, primary channel repeater receiver degradation can result from transmitters operating on the 467 MHz interstitial frequencies. Unless all close vicinity GMRS repeater owner/operators were notified in advance of Tandy's tests, interference with receiver degradation may have resulted but the source of which was unknown to the licensees.

32. Tandy needs to clarify whether GMRS repeater licensees were notified of the tests. If they were not, then the accuracy of Tandy's statement quoted in paragraph 29 supra, as well as their whole testing process, needs careful re-review by the Commission.



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IV.

CONCLUSION

33. This Commenter, in general, is in opposition to this Petition. Mixing an unlicensed FRS with the licensed GMRS offers great potential for abuse without regulatory enforcement, particularly from the commercial sector. One only needs to look at the proliferative abuse of so-called "color-dot" transceivers on the 462 MHz primary channels by illegal commercial users to understand the great concerns felt by legitimate GMRS users.

34. If, however, the Commission should find it in the public interest to eventually adopt a FRS, then the service should be structured as follows:

a. FRS transceivers should be allowed only to transmit/receive on the 462 MHz interstitial frequencies for routine communications and 462.675 MHz for short-distance emergency communications only.

b. FRS transceivers must be prohibited from transmitting on the 467 MHz interstitial frequencies and 467.675 MHz.

c. FRS transceivers should be narrow-spaced, incapable of wide-spacing alteration to transmit/receive on the 467 MHz band.

d. FRS transmitters should be restricted to a 500 mW ERP limit.

e. FRS transceivers should utilize an internally attached antenna with no external antenna connections available.

f. FRS transmissions on the 462.675 MHz frequency should be accompanied by a simple WT + 7 digit telephone number call sign identification.



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35. Lastly, this Commenter is fully aware of the recent passage in the United States House of Representatives of Bill HR 4522, as amended, which modifies the Communications Act of 1934, as amended, and will, upon passage in the United States Senate, allow the Commission to de-license any or all of the personal radio services.^{16/} This Commenter therefore expresses the sentiment that the Commission should not view the passage of HR 4522 and adoption of a FRS as the first steps to the de-licensing of the GMRS. Any such future considerations will meet stiff opposition from the GMRS community.

36. Should the Commission ultimately adopt a FRS Notice of Proposed Rule Making, then incorporation of the concerns brought forth in these Comments is in the public interest.

Respectfully submitted,

Michael C. Trahos
Dr. Michael C. Trahos, D.O., NCE, CET

MCT/mct



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V.

FOOTNOTES

- 1/ PETITION FOR RULE MAKING, RM-8499, July 20, 1994,
at Footnote 12.
- 2/ REPORT AND ORDER, PR 87-265, FCC 88-318, at Paragraph 63.
- 3/ Ibid.
- 4/ NOTICE OF INQUIRY, PR 91-170, FCC 91-187, in general.
- 5/ Ibid, at Paragraph 9 and Footnote 13.
- 6/ NOTICE OF PROPOSED RULE MAKING, PR 92-235, FCC 92-469,
Section III, Part A, Page 3.
- 7/ Ibid, at Footnote 2.
- 8/ REPORT AND ORDER, PR 87-265, FCC 88-318, at Paragraph 63.
- 9/ POLICY STATEMENT, Standards for Assessing Forfeitures,
6 FCC Rcd 4695 (1991), MEMORANDUM OPINION AND ORDER, Standards
for Assessing Forfeitures, FCC 93-212, and M,O&O ERRATUM,
23497, June 11, 1992.
- 10/ PETITION FOR RULE MAKING, RM-8499, July 20, 1994,
at Paragraph 14.
- 11/ Ibid.
- 12/ REPORT AND ORDER, PR 87-265, FCC 88-318, at Paragraph 22.
- 13/ Ibid, at Paragraph 28.
- 14/ PETITION FOR RULE MAKING, RM-8499, July 20, 1994,
at Page 9.
- 15/ Ibid, at Footnote 15.
- 16/ HR 4522, amended August 11, 1994, Section 9, Page 14, Line 15.



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VI.

CERTIFICATE OF SERVICE

I, Dr. Michael C. Trahos, do hereby certify that a copy of these COMMENTS were sent by United States First Class Mail to the parties listed below on the day and date first above written.

1. John W. Pettit, Esquire
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Respectfully,

Michael C. Trahos
Dr. Michael C. Trahos

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